

REMARKS

The Examiner has rejected claims 11, 13, 14, 16, and 19-24 under 35 USC 112, first paragraph. In response thereto, claims 11, 13, and 24 have been cancelled and independent claims 20 and 23 have been amended to overcome the Examiner's rejection.

Specifically, with respect to the amendment to claim 20, the displacement of the claws has been further specified as the “displacement towards and into one another in the clamping direction”, to thereby precisely define the clamping direction. Support for this amendment is found in Figure 2 of the application as filed. There, the clamping direction of the clamping device is shown as a double arrow with numeral 34. As can be seen in that figure, the claws 21, 22 of the clamping device guide one another mutually in order to allow relative movement of the claws 21, 22 in the clamping direction.

This is precisely the clamping direction as is introduced in the application on page 1, 4th paragraph, last two lines. As explained in the introduction of the current application the invention actually departs from “turnbuckle devices”, that is, clamping devices specifically showing this relative movement along the clamping direction. This clamping direction, therefore, in view of a person skilled in the art, is defined by the relative movement of the claws in their mutual guiding.

Furthermore, the “guiding direction” has been further specified as “said wedge guiding direction being inclined at an angle between 40° and 85° with respect to said clamping direction”, c.f. claims 11 and 13 or page 4, 3rd paragraph of the application as filed.

Also, the spaced apart parallel linear grooves disposed in said wedge have been further specified as “...for causing the displacement of the claws upon the transitional sliding movement of the wedge...”. Support for this can be found e.g. p. 12, 3rd and 4th paragraph as well as Figure 2 of the application as filed.

With respect to the amendments to claim 23, the claws have been further specified as to “being displaceable toward and into one another” as has been explained above with reference to claim 20.

The wedge has further been specified as “being positioned with its central axis running along the wedge guiding direction inclined with respect to the straight line at an angle between 40° and 85°”. Support for this can be found e.g. on page 15, 2nd paragraph, Figure 3c, page 16, last two lines to page 17, 1st line, Figure 3e of the application as filed.

Further, the obvious typo “transitional” has been corrected and now reads “translational”.

With respect to claim 16 the “turnbuckle device” has been replaced by “said device” in view of the Examiner’s objections to Claim 16 under 35 USC 112, second paragraph, as being indefinite.

As to the features of “spaced apart parallel linear grooves disposed in said wedge” (claim 20) and “each wedge having spaced apart parallel linear grooves”, (claim 23), attention is directed to the multiple grooves 32 which are slanted by an angle ϵ toward the clamping direction, as shown in Figure 2, page 12, 2nd paragraph of the application as filed. As all the grooves are slanted by the same angle, they are, by definition, parallel, as is clearly shown in Figure 2. A person skilled in the art does in fact take these grooves as being parallel to one another.

The Examiner, therefore, is respectfully requested to withdraw this rejection.

With respect to independent claim 20, document EP ‘621 discloses concrete shell elements 16, 17 and a device 2, 3 for clamping the concrete shell elements to one another. The device features spaced apart opposite claws displaceable toward and into one another in a clamping direction, the claws being configured for guiding one another for enabling

the displacement toward and into one another in the clamping direction; teeth disposed on one of the claws, said teeth being slanted at an angle with respect to the clamping direction; a “wedge” (if one really wants to take a threaded bolt for a wedge) in the form of a rotatable threaded bolt (9; Figure 1, 2) disposed through claw openings for causing displacement of the claws upon a sole rotary movement of the rotatable wedge (threaded bolt) within the openings in a rotational wedge guiding direction around an axis running along the clamping direction; spaced apart grooves disposed in said wedge (threaded bolt) for engaging said teeth for causing the displacement of the claws upon rotation of the wedge (threaded bolt) within the claw openings.

EP'623 obviously fails to show a slidable wedge for causing displacement of the claws upon translational sliding movement of the wedge within the opening in a wedge guiding direction.

The Examiner is politely asked to pay particular attention again to Figures 1 and 2 of EP'621: There, the wedge, that is the threaded bolt 9 (Fig.1), needs to engage the threads of portion 11 of the right movable jaw which is slidably received within the opening of the passage 8, axially of the passage (c.f. column 2, lines 23-34) in order to move the movable right jaw towards or away from the left jaw 2.

For this, a rotation of the “wedge” (threaded bolt 9) is absolutely necessary with the wedge (threaded bolt 9) being supported on the left claw by abutment of the “wing” fitting provided on the wedge against vertical plates 4,5 or the front plate connecting said vertical plates as shown in Fig. 1 of EP'621.

Regarding this, the “wing” fitting 10 is being mounted axially non-displaceably on the wedge (threaded bolt 9) and is secured on the wedge by a nut mounted on the free end of the wedge (threaded bolt 9).

As such, a translational sliding movement of the wedge for causing displacement of the claws towards and into one another is clearly ruled out.

Moreover, in EP'621, the wedge guiding direction, that is the direction of the translational sliding movement of the wedge for causing displacement of the claws is not inclined at an angle between 40° and 85° with respect to the clamping direction: The clamping direction of the clamping device shown in Figures 1 and 2 of EP'621 is the direction of movement of the claws (please note: **not** relative movement of the tip of their arms) towards and into one another, which is here axially to the wedge (threaded bolt 9). Per definition of the features of Claim 20 of the application, there is **no** such wedge guiding direction to be found in EP'621 whatsoever.

In EP'621, not even the rotational axis of the wedge (threaded bolt 9) is inclined to the clamping direction. [Definition of “inclined” according to the Merriam-Webster Online Dictionary:

1. having inclination, disposition, or tendency
2. a) having a leaning or slope
b) making an angle with a line or plane]

Instead, the rotational axis and the clamping direction are coaxial.

In conclusion, the Applicant submits that a prima facie case of anticipation cannot be established for amended independent claim 20.

With respect to Claim 23, EP'621 further fails to show a wedge that is slidably guided in each clamping device along a wedge guiding direction with a sliding position of each wedge in the each device determining displacement of the claws of each device (as has been extensively discussed above with respect to Claim 20).

EP'621 also fails to show the wedge (threaded bolt 9) being positioned with its central axis running along the wedge guiding direction inclined with respect to the straight line and at an angle between 40° and 85° with respect to the clamping direction.

Dependent claims 11, 16, 19, and 24 are accordingly not anticipated in view of the non-anticipated independent claims 20 and 23.

The Examiner has rejected claim 23 under 35 USC 102(b) as being anticipated by German Offenlegungsschrift DE 3545273. However, The Examiner's rejection refers to claim 20, therefore the statement that claim 23 is being rejected is interpreted as a typo.

Document DE '273 discloses, Figures 1, 2, 3, and 7 for example, concrete shell elements 1,1; a device 11 for clamping the concrete shells to one another, the devices having spaced apart opposing claws 12, 13 displaceable toward and into one another in a clamping direction, the claws being configured for guiding one another for enabling the displacement toward and into one another; teeth disposed on one of the claws, said teeth being slanted at an angle with respect to the clamping direction; a slidable wedge disposed through claw openings for causing displacement of the claws upon translational sliding movement of the wedge within the openings in a wedge guiding direction, said wedge guiding direction being inclined at an angle of exactly 90 degrees with respect to said clamping direction; and spaced apart parallel linear grooves disposed in said wedge for engaging said teeth for causing displacement of the claws upon the translational sliding movement of the wedge within the claw opening.

DE '273 fails to show the essential feature of the invention, that the wedge guiding direction is at an angle between 40 degrees and 85 degrees with respect to said clamping direction.

The claw 43 and the unmarked other claw are displaceable toward and into one another along an axis parallel to the edge designated with number 19 in Fig. 7, that is the clamping direction runs along the arrow right next to designation number 11 in Fig 7. As to the Examiner's reference to Fig. 2 and col. 2, lines 37-39, cited claim 14 of DE'272 actually defines that at least one of the wedge faces causing a clamping force of the clamping element is inclined with respect to the skin 1 of the concrete shell elements 4. This feature is illustrated in Fig. 7 and further explained in col. 15, lines 7-45.

The wedge in Fig. 7, consequently is simply rotated about its (longitudinal) axis along which the wedge is slidably guided within the openings of the claws. This longitudinal axis corresponds to the wedge guiding direction.

Thereby, the wedge guiding direction is **not** inclined at an angle different from 90° with respect to the clamping direction.

Therefore, claim 20 is not anticipated by DE '273.

With respect to claim 23, it is pointed out, that DE '271 fails to show a wedge being positioned with its central axis running along the wedge guiding direction inclined with respect to the straight line and at an angle between 40° and 85° with respect to the clamping direction in order to avoid collision of neighboring devices as each wedge is translationally advanced or driven out (of the clamping device).

Claim 23, therefore clearly not anticipated by DE '273.

The Examiner, therefore, is respectfully asked to withdraw these rejections.

With regards to novelty of claim 23 over EP '621, the Applicant reiterates the argument hereinabove set forth.

Even though this document is not considered the closest prior art, which in the view of the Applicant, is rather given by document DE'273, the invention according to claim 23 differs from EP'621 in that the clamping device has a slidable wedge for causing displacement of the claws upon translational sliding movement of the wedge within the opening in a wedge guiding direction, the wedge guiding direction, that is the direction of the translational sliding movement of the wedge for causing displacement of the claws being inclined at an angle between 40° and 85° with respect to the clamping direction.

The concrete shell system according to the invention, thereby allows for a facilitated and speedy clamping of the concrete shell elements by just forcefully driving a wedge into the clamping element with a tool, preferably a hammer, as is known from practice. An obstruction of neighboring clamping devices by their wedges may be avoided even in the event of tight spacing of the clamping devices.

As such, the objective problem to be solved is to further develop a concrete shell system as shown in EP '621 to allow an easier and speedier forceful clamping of the concrete shell elements without obstruction of neighboring clamping devices by their wedges even in the event of tight spacing of the clamping devices.

EP '621 fails to give a person skilled in the art any hint that would lead him to the teaching of claim 23. In EP'621, the wedge needs to be rotated to thereby move the claws in the clamping direction towards and into one another.

A person skilled in the art would most likely try to substitute the "wing" provided on the bolt by a lever with a longer lever arm, allowing for an improved leverage and choose a steeper thread pitch for a speedier movement of claws 2,3 towards and into one another in the clamping direction during rotator movement of the wedge (threaded bolt 9). This, however would not lead him to the solution according to the invention. As has been shown, claim 23 has not been obvious over EP '621.

The Examiner, therefore, is respectfully asked to withdraw this rejection.

The concrete shell system according to the invention has furthermore not been obvious over EP '621 in the light of DE '273.

Even if a person skilled in the art would consider incorporation a wedge that can be driven into the clamping device with a tool, e.g. a hammer, to thereby quickly move the claws of the clamping device towards and into one another, which would already require a profound constructional change as to the threads provided on portion 11 of claw

3 and the corresponding thread on the wedge, he would not arrive at the specific construction according to the invention. The wedge would still not be positioned with its central axis running along the wedge guiding direction inclined at an angle between 40° and 85° with respect to the clamping direction.

Therefore, Claim 23 is without any doubt, based on an inventive step.

As claims 20 and 23 are novel and based on an inventive step, the dependent claims are as a consequence, also new and based on an inventive step.

In view of the arguments hereinabove set forth and amendment to the claims, it is submitted, that each of the claims now in the application define patentable subject matter not anticipated in the art of record and not obvious to one skilled in this field who is aware of the references of record. Reconsideration and allowance are respectfully requested. This innovation is of utmost importance to the applicant, who wishes to receive a patent in the U.S.A. as has been meanwhile granted abroad.

Therefore, in case that the Examiner does have still have minor objections to this application, he is respectfully invited to discuss this case by telephone with the undersigned to avoid unnecessary prolongation of the procedure.

Respectfully submitted,



Walter A. Hackler, Reg. No. 27,792

Attorney of Record

2372 S.E. Bristol, Suite B

Newport Beach, California 92660

Tel: (949) 851-5010

Fax: (949) 752-1925